

CLAIMS

1. A nucleic acid molecule for detecting a nucleic acid molecule, which is a partially double-stranded nucleic acid molecule comprising (a) a single-stranded nucleic acid molecule complementary to the nucleic acid molecule to be detected and (b) one or two single-stranded nucleic acid molecules which hybridize with part of the single-stranded nucleic acid molecule (a), wherein the region of the partially double-stranded nucleic acid molecule which assumes a single-stranded structure is complementary to a region comprising a recognition site in the nucleic acid molecule to be detected.

2. A nucleic acid molecule according to Claim 1, wherein the length of the region that assumes a double-stranded structure is 10 to 200 nucleotides.

3. A nucleic acid molecule according to Claim 1 or 2, wherein the length of the region that assumes a single-stranded structure is 1 to 10 nucleotides.

4. A nucleic acid molecule according to any of Claims 1 through 3, wherein either one of the single-stranded nucleic acid molecule (a) or the single stranded nucleic-acid molecule (b) is labeled with a donor fluorescent dye, while the other is labeled with an acceptor fluorescent dye.

5. A nucleic acid molecule according to any one of Claims 1 through 4, wherein the single-stranded nucleic acid molecule (a) and the single stranded nucleic-acid molecule (b) are connected by means of a linker.

6. A nucleic acid molecule according to Claim 5, wherein the linker is a nucleic acid.

7. A nucleic acid chip comprising a nucleic acid molecule according to any of Claims 1 through 6 fixed on a substrate.

8. A method for detecting a nucleic acid molecule, comprising a step in which a nucleic acid according to any of Claims 1 through 6 is brought into contact with a nucleic acid molecule to be detected under conditions that allow hybridization.

9. A method for detecting a nucleic acid molecule according to Claim 8, wherein a nucleic acid according to any of Claims 1 through 6 is brought into contact with a nucleic acid molecule to be detected in the presence of an amine or quaternary ammonium salt.

10. A method for detecting a nucleic acid molecule according to Claim 8 or 9, wherein a nucleic acid according to any of Claims 1 through 6 is brought into contact with a nucleic acid molecule to be detected in the presence of a cationic polymer.

11. A mismatched sequence detection method for detecting a sequence mismatch between a sample single-stranded nucleic acid molecule and a standard single-stranded nucleic acid molecule, comprising a step in which a nucleic acid molecule which is a partially double-strand nucleic acid molecule comprising (a) a single-stranded nucleic acid molecule complementary to the sample single-stranded nucleic acid molecule and (b) one or two single-stranded nucleic acid molecules which hybridize with part of the single-stranded nucleic acid molecule (a), the region which

assumes a single-stranded structure in the partially double-strand nucleic acid molecule being complementary to a region comprising a site where the mismatched sequence is anticipated in the sample single-stranded nucleic acid molecule, is brought into contact with the sample single-stranded nucleic acid under conditions which allow hybridization.

12. A mismatched sequence detection method according to Claim 11, wherein the partially double-strand nucleic acid molecule is brought into contact with the sample nucleic acid molecule in the presence of an amine or quaternary ammonium salt.

13. A mismatched sequence detection method according to Claim 11 or 12, wherein the partially double-strand nucleic acid molecule is brought into contact with the sample nucleic acid molecule in the presence of a cationic polymer.

14. A nucleic acid molecule detection method wherein a first detection probe complementary to a region which does not comprise a recognition site in a nucleic acid molecule to be detected is added to a sample comprising the nucleic acid molecule to be detected, and a second detection probe which comprises a nucleotide sequence identical to that of the first detection probe and which is complementary to the region comprising a recognition site in the nucleic acid molecule to be detected is then added, the nucleic acid molecule to be detected, the first detection probe and the second probe are brought together under conditions that allow hybridization, and nucleic acid molecule detection is then performed using as the marker either binding between the nucleic

acid molecule to be detected and the second detection probe, or dissociation between the nucleic acid molecule to be detected and the first detection probe.

15. A nucleic acid molecule detection method according to Claim 14 wherein the nucleic acid molecule to be detected, the first detection probe and the second probe are brought together in the presence of an amine or quaternary ammonium salt.

16. A nucleic acid molecule detection method according to Claim 14 or 15, wherein the nucleic acid molecule to be detected, the first detection probe and the second probe are brought together in the presence of a cationic polymer.